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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/053,365	10/26/2001	Steven B. Dawes	SP01-277/9272-8	2877
20792	7590	11/23/2004	EXAMINER	
MYERS BIGEL SIBLEY & SAJOVEC			CHIN, PETER	
PO BOX 37428			ART UNIT	
RALEIGH, NC 27627			PAPER NUMBER	
			1731	

DATE MAILED: 11/23/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

## Office Action Summary

Application No.

10/053,365

Applicant(s)

DAWES ET AL.

Examiner

Peter Chin

Art Unit

1731

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 9/2/2004.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-14, 16-24 and 27-131 is/are pending in the application.
- 4a) Of the above claim(s) 57-131 is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-14, 16-24 and 27-56 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
  - ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- ☐ Notice of References Cited (PTO-892)
- ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)  
Paper No(s)/Mail Date \_\_\_\_\_
- ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_\_
- ☐ Notice of Informal Patent Application (PTO-152)
- ☐ Other: \_\_\_\_\_

### DETAILED ACTION

1. Claims 1,2 and 51 are rejected under 35 U.S.C. 102(b or e) as anticipated by or, in the alternative, under 35 U.S.C. 103(a) as obvious over Ishiguro et al (5,022,904), Yokoyama et al (6,535,679), Schneider et al (4,557,561), Hicks (4,579,571) or Ishikawa et al (5,895,515).

Ishiguro et al shows a process for doping a soot preform with fluorine (F) containing gas in a uniform heating or a zone heating furnace (Figures 3A and 3B), which furnace reads on and corresponds to the claimed "vessel". The preform is doped in a first doping step with an amount of F that is 1.3 – 2.5X the amount of F used in the second step. The replacement or change over from the first higher concentration F atmosphere to the second lower concentration F atmosphere means that the previous F atmosphere is withdrawn and hence inherently evacuated to a reduced F content. Thus, Ishiguro et al anticipates or obviously shows the claimed invention.

Yokoyama et al relates to a process for making an optical fiber. A silica soot preform is produced in which a number of cladding layers surround a core. The clad layers have differing refractive indices, which are a result of heating the preform in gaseous atmospheres containing different levels of dopant, e.g., F. Dehydration and sintering are performed in a single vessel, penultimate paragraph of column 9, see also the discussion in columns 11 and 12. The change over or replacement with one concentration of the dopant with another atmosphere of the dopant at a different concentration inherently evacuates the previous dopant atmosphere by the succeeding dopant atmosphere. Also, the present claims by virtue of "comprising" claim language,

are open to intervening clad layer formation between the doping steps. Thus, Yokoyama et al anticipates or at the least obviously shows the claimed invention.

Schneider et al discloses a process for forming silica preform having a core and multiple clad layers. As noted above, the claims are open to separate doping of each cladding layer. The preform is doped in an F containing atmosphere and each layer doped with a different amount of F and thus, in a different doping atmosphere. The doping of each layer is performed in the same vessel. Thus, the preceding doping atmosphere is inherently evacuated and replaced the succeeding doping atmosphere. Schneider et al anticipates or obviously shows the claimed invention.

Hicks relates to a process for doping a silica preform with F. Multiple layers are formed on a core. Each layer of soot is fluorinated in a gaseous F containing atmosphere after soot layer formation and consolidated. Thus, the preceding F doping atmosphere is inherently evacuated and replaced by another F doping atmosphere. Hicks anticipates or obviously shows the claimed invention.

Ishikawa et al discloses a process for doping a silica soot preform. The preformed is doped simultaneously with the growth of the soot preform. The concentration of the gaseous dopant, e.g., an F containing gas, in the doping atmosphere is changed according to the desired doping profile. The incremental doping is performed in the same vessel. The change in the doping atmosphere inherently evacuates the previous doping atmosphere. Also, the claims by virtue of claim language is open to doping during soot formation and deposition. Thus, Ishikawa et al anticipates or obviously shows the claimed invention.

Note in regard to claim 51, in absence of further limitation(s) defining "pulse", the claim reads on the initial charging and subsequent change over to different dopant concentrations in the prior art treatment vessel.

2. Claims 3-14,16-24,27-50,52-56 are rejected under 35 U.S.C. 103(a) as being unpatentable over Ishiguro et al (5,022,904), Yokoyama et al (6,535,679), Schneider et al (4,557,561), Hicks (4,579,571) or Ishikawa et al (5,895,515).

Ishiguro et al measures the total pressure and the partial pressure of the dopant. Yokoyama et al measures the dopant in terms of ppm in the doping atmosphere. Schneider et al measures the dopant in terms of volumetric flow rate. Hicks is silent as the measurement of the amount of dopant in the doping atmosphere. Ishikawa et al measures volumetric flow rate of the dopant gas. It would have been obvious to pressurize and/or depressurize treatment vessel in the manner claimed in order to charge and change the amount of dopant gas in the prior art processes. The claimed temperatures and pressures recited in various dependent claims are obvious

3. Applicant's arguments have been considered but are deemed unpersuasive of patentability. It is urged that the prior art does not using "pulsed" doping according to the present disclosure and to the definition in Webster's Dictionary. The term "pulse" does not patentably define over the multiple changing of the doping atmosphere in the prior art.

4. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Peter Chin whose telephone number is (571) 272-1186. The examiner can normally be reached on Monday through Friday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Steven Griffin can be reached on (571) 272-1189. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



PETER CHIN  
PRIMARY EXAMINER